

**Amendments to the Specification:**

Please replace the paragraph between page 7, line 12 and page 8, line 4 with the following amended paragraph:

Figs. 1(a) and 1(b) are block diagrams of a DSSS/CCK communication system which, for example, may be employed in an IEEE 802.11b wireless LAN. As shown in Fig. 1(a), source bits in a data packet are first scrambled by a scrambler 1 and grouped into the  $k$ th 8-bit block 2 ( $b(k) = \{b_0(k), b_1(k), \dots, b_7(k)\}$ ) at time  $k$  ( $k = 0, 1, \dots, K-1$ ). Then, the first bit pair ( $b_0(k), b_1(k)$ ) is mapped to a differentially encoded phase angle  $\phi_1(k)$  based on a DQPSK encoder 31 and the other bit pairs ( $b_2(k), b_3(k)$ ), ( $b_4(k), b_5(k)$ ), and ( $b_6(k), b_7(k)$ ) are respectively mapped to  $\phi_2(k)$ ,  $\phi_3(k)$ , and  $\phi_4$  based on a natural QPSK encoding in encoders 32, 33, and 34. Note that each of the four angles can take a value in the set of  $\{0, \pi/2, \pi, 3\pi/2\}$ . Among the four angles, the naturally encoded angles  $\phi_2(k)$ ,  $\phi_3$ , and  $\phi_4$  are used to generate one of 64 base CCK codewords  $c(k) = (c_0(k), c_1(k), \dots, c_7(k))$  in selector 4 according to the following equation:

$$\mathbf{c}(k) = (e^{j(\phi_2(k)+\phi_3(k)+\phi_4(k))}, e^{j(\phi_3(k)+\phi_4(k))}, e^{j(\phi_2(k)+\phi_4(k))}, -e^{j\phi_4(k)}, e^{j(\phi_2(k)+\phi_3(k))}, e^{j\phi_3(k)}, -e^{j\phi_2(k)}, 1), \quad (1)$$